

WHAT IS CLAIMED IS:

1. A method of making a powder concentrate comprising:

5 forming an aqueous dispersion containing at least one additive and one or more dispersing agents, wherein at least one dispersing agent comprises a first copolymer of ethylene and acrylic acid monomers; and

10 spray drying the dispersion to form the powder concentrate.

2. The method of Claim 1, further comprising:

15 stirring the dispersion in a mixer for at least 1/2 hour to form a stirred dispersion; and

15 processing the stirred dispersion through a milling apparatus to form a milled dispersion prior to the spray drying step.

3. The method of Claim 2, wherein the milling step comprises:

20 passing the stirred dispersion through the milling apparatus during a first pass and removing a first liter of the dispersion that passes through the milling apparatus during the first pass to form a first pass milled dispersion;

25 passing the first pass milled dispersion through the milling apparatus during a second pass and removing a first liter of the dispersion that passes through the milling apparatus during the second pass to form a second pass milled dispersion; and

30 passing the second pass milled dispersion through the milling apparatus during a third pass and removing a first liter of the dispersion that passes through the milling apparatus during the third pass to form a third pass milled dispersion.

4. The method of Claim 2, wherein the milled dispersion contains particles, wherein less than about 2.0 weight percent of the particles have a particle size greater than 2 microns.

35 5. The method of Claim 1, wherein the spray drying step comprises processing the dispersion through a dryer having an inlet

temperature of about 220°C, an outlet temperature of about 90°C, an atomizer running at about 24,350 revolutions per minute, and a spray drying rate of about 25 pounds of concentrate per hour.

5 6. The method of Claim 1, wherein the aqueous dispersion comprises (a) up to about 25 wt% of a colorant; (b) from about 2.0 to about 10.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and (c) from about 1.0 to about 5.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500; wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the aqueous dispersion.

10 7. The method of Claim 6, wherein the aqueous dispersion comprises (a) about 20 wt% of a colorant; (b) from about 2.0 to about 8.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and (c) about 2.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500; wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the aqueous dispersion.

15 8. The method of Claim 1, wherein the powder concentrate comprises (a) from about 50 to about 98 wt% of a colorant; (b) from about 5.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and (c) from about 5.0 to about 10.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined

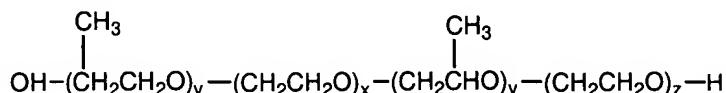
molecular weight of about 2500; wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

9. The method of Claim 8, wherein the powder concentrate comprises (a) from about 65 to about 85 wt% of a colorant; (b) from about 10.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and (c) from about 6.0 to about 8.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500; wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

10. A method of making a paste comprising:
forming a mixture comprising the concentrate formed in
the method of Claim 1 and at least one carrier material.

11. A powder concentrate formed from the method of Claim 1.

12. A powder concentrate comprising:
at least one additive; and
a combination of dispersing agents comprising (i) a first
copolymer of ethylene and acrylic acid; and (ii) a block copolymer of
ethylene oxide and propylene oxide having a structure as shown
below:



30 wherein v, x, y and z each independently represent a number ranging from 0 to about 40, and wherein either v or z equals 0.

35 13. The powder concentrate of Claim 12, wherein the powder
concentrate comprises:
(a) from about 50 to about 98 wt% of an additive;

(b) from about 5.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

5 (c) from about 5.0 to about 10.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

10 wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

14. The powder concentrate of Claim 13, wherein the powder concentrate comprises

15 (a) from about 65 to about 85 wt% of a colorant;

(b) from about 10.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

20 (c) from about 6.0 to about 8.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

25 wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

15. The powder concentrate of Claim 12, wherein the powder concentrate comprises

30 (a) greater than 75 wt% of a colorant;

(b) from about 8.0 to about 16.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

35 (c) from about 4.0 to about 10.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total

weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

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16. The powder concentrate of Claim 12, wherein the powder concentrate has an average particle size of less than about 2.0 microns.

10 17. The powder concentrate of Claim 12, wherein the powder concentrate consists essentially of:

(a) from about 50 to about 98 wt% of an additive;

(b) from about 5.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

(c) from about 5.0 to about 10.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

20 wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

25 18. The powder concentrate of Claim 17, wherein the powder concentrate consists essentially of:

(a) from about 65 to about 85 wt% of a colorant;

(b) from about 10.0 to about 30.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

(c) from about 6.0 to about 8.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

30 35 wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

19. The powder concentrate of Claim 12, wherein the powder concentrate consists essentially of:

5 (a) greater than 75 wt% of a colorant;

(b) from about 8.0 to about 16.0 wt% of a first copolymer of ethylene and acrylic acid, wherein the first copolymer contains about 20.5 wt% acrylic acid, based on a total weight of the first copolymer; and

10 (c) from about 4.0 to about 10.0 wt% of a block copolymer of ethylene oxide and propylene oxide, wherein the block copolymer contains about 20.0 wt% ethylene oxide, based on a total weight of the second copolymer, and contains propylene blocks having a combined molecular weight of about 2500;

15 wherein the weight percent of each of (a), (b), and (c) is based on a total weight of the powder concentrate.

20 20. The powder concentrate of Claim 12, wherein v, x, y and z each independently represent a number ranging from about 10 to about 30, and wherein either v or z equals 0.

21. The powder concentrate of Claim 12, wherein the sum of v and y is equal to about 42 and z equals 0.

25 22. A paste comprising:

the powder concentrate of Claim 12; and
at least one carrier material.